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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,980	12/16/2005	Akemitsu Iida	Q92097	3728
23373 7590 07/03/2007 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER VANOY, TIMOTHY C	
			ART UNIT 1754	PAPER NUMBER
			MAIL DATE 07/03/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/560,980	Applicant(s) IIDA ET AL.	
	Examiner Timothy C. Vanoy	Art Unit 1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-22 is/are rejected.
- 7) ☒ Claim(s) 18, 19 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :May 14, 2007; Nov. 27, 2006; July 25, 2006; Dec. 16, 2005.

DETAILED ACTION

Priority

Acknowledgment is made of applicants' claim for foreign priority based on an application filed in Japan on June 17, 2003. It is noted, however, that the applicants have not filed a certified copy of the Japanese application (i. e. JP 2003-172,553) as required by 35 U.S.C. 119(b).

Specification

- a) On pg. 5 in the applicants' specification, there are two brief descriptions of Figure 8, and no brief description of Figure 9.

Claim Objections

- a) There is no antecedent basis in the previous claim language for the "said granular catalyst" set forth in the last line of claim 18.
- b) There is no antecedent basis in the previous claim language for the "granular catalyst" set forth in the last line of claim 19.
- c) There is no antecedent basis in claim 17 for the "said solid-cylindrical electrode" mentioned in the first line of claim 21.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 1754

Claims 12, 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as the invention.

- a) While claim 12 sets forth a method for treating a gas, there are no positive process steps in the body of the claim which treats a gas.
- b) In claim 19, the phrase "an outer surface of said hollow-cylindrical insulator comes into direct contact with said hollow-cylindrical insulator" does not make any sense. It is not clear what the applicants mean by this phrase.
- c) The term "many" in claim 20 is a relative term, which renders the claim indefinite. The term "many" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Publication No. 2002-336,653 (hence "JP-653").

The English abstract of JP-653 describes a method and apparatus for catalytically decomposing an "odor component" or "injurious ingredient" (please also see

Art Unit: 1754

claim 6 in the English translation of JP-653), such as unburned fuel, hydrocarbons, nitrogen oxides, dioxins, etc. (please also see claims 8 and 9 in the English translation of JP-653) by passing the contaminated gas into a reactor that is equipped with a low temperature plasma reactor and a catalyst. The catalyst may be manganese oxide with an oxide of copper (which is not seen to be distinct from the applicants' "hopcalite"), in a manner that is not seen to be distinct from the applicants' method claims. The description of Figure 5 in the English translation of JP-653 sets forth that the apparatus contains: (i) a discharge electrode (21), (ii) a counter electrode (22) and (iii) a catalyst (23): please also see the "Description of the Drawings" set forth in the English translation of JP-653 - in a manner that is not seen to be distinct from the applicants' apparatus claims.

The following references are made of record:

GB 2,270,013 A disclosing a catalytic method for purifying the exhaust from an internal combustion engine by using a plasma discharge;

EP 0,608,619 B1 disclosing a device for removing particulate pollutants from a gaseous medium by using electrodes (please see claims 1 and 2);

US 2003/0170154 A1 disclosing the plasma assisted catalytic treatment of gases;

U. S. Pat. 7,011,796 B2 disclosing the plasma assisted catalytic treatment of gases;

Art Unit: 1754

U. S. Pat. 7,070,744 B2 disclosing the purification of exhaust gases from an internal combustion engine by using plasma-generating electrodes;

U. S. Pat. 5,711,147 disclosing the plasma-assisted catalytic reduction system, and

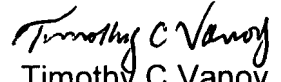
U. S. Pat. 3,983,021 disclosing the removal of nitrogen oxides from gases via contact with solids and electric discharge.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy C. Vanoy whose telephone number is 571-272-8158. The examiner can normally be reached on Mon-Fri 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1754

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Timothy C Vanoy
Primary Examiner
Art Unit 1754

tcv